PHAR LAP
CFIG386
UTILITY GUIDE
386|DOS-EXTENDER SDK

CFIG386
Utility Guide

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Preface

This manual, *CFIG386 Utility Guide*, is for people who intend to customize their Phar Lap program(s) with preset command line switches. This manual presumes a familiarity with our programs, especially the program defaults, which are set up first, and with the order of precedence for processing switches. This manual does not contain information on those switches or their processing. For books and manuals with that information, please see the Related Documentation and Books section at the end of this preface.

This manual has one chapter, Using CFIG386, which documents the command line operands as well as the redistributing of 386 | DOS-Extender and one appendix, CFIG386 Error Messages.

If, after you have read this book, you find that you have suggestions, improvements or comments that can make this a better manual, please call us, write us or send us mail at:

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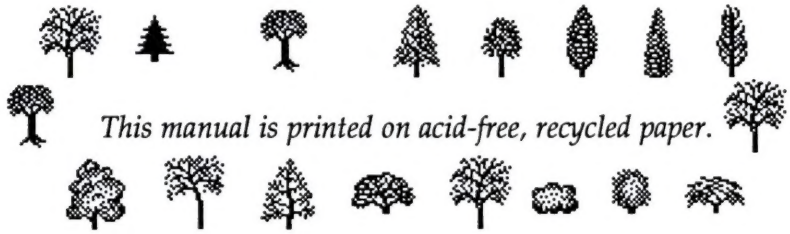
Manual Conventions

This manual relies on certain conventions to convey certain types of information. On the following pages, these are the conventions:

`courier`	indicates the items on the command line.
`italics`	indicate the items on the command line that must have a user-entered name or value in place of the items in italics.
`[]`	square brackets indicate that one or more of the enclosed items may be chosen. It is valid not to choose any of the items in square brackets.
...	ellipsis indicates an item or items that may be repeatedly entered.

Related Documentation and Books

Phar Lap Software, Inc., *386|DOS-Extender Reference Manual.*
Phar Lap Software, Inc., *386|LINK Reference Manual.*



This manual was produced on a Macintosh IIcx, using MS-Word. The examples illustrated in this manual were developed with CFIG386, version 3.0.

Chapter 1

Using CFIG386

1.1 Introduction

All Phar Lap programs support the use of command line switches to override the default operation of the program. The CFIG386 utility allows you to customize a Phar Lap program by specifying command line switches to be automatically processed every time the program is run. Judicious use of the CFIG386 utility will allow you to avoid having to type commonly used switches every time you run a program.

When a Phar Lap program is run, the program defaults are first set up. Then, any switches configured into the program are processed from left to right. Lastly, any switches given on the command line are processed from left to right. If any conflicting switches are given, the last switch processed takes precedence. Thus, switches configured into a program can be overridden with command line switches.

1.2 How to Run CFIG386

The command line format for CFIG386 is the following:

```
CFIG386 [switch ...] exefilename [progswitches ...]
```

Where *switches* are switches to be processed by CFIG386, *exefilename* is the name of the executable file to configure, and *progswitches* are the optional switches to be added to the executable program. If the *progswitches* parameter is omitted, CFIG386 will display the configured switch values for the executable program.

1.3 Specifying A File

The first command operand is the name of the .EXE file that you want to configure. The file must be a Phar Lap program. It need not have the original name the program was distributed under; the CFIG386 utility will work with renamed programs. The operand must follow the standard DOS file name conventions.

Example:

```
\MYLIB\386ASM
RUN386
A:386LINK.EXE
```

If a file name extension is not specified, then .EXE is assumed.

1.4 Configuring New Switches Into a Program

Following the file name, you list one or more command switches. The switches are given in the same format they are given on the command line for the program being configured. The specified switches are added to the configuration block of the program, after any switches that are already there from any previous configurations.

Example:

```
CFIG386 386ASM -NOLIST -8086
CFIG386 RUN386 -MINREAL 100h -MAXREAL 400h
```

1.5 Clearing Configured Switches

The -CLEAR switch causes CFIG386 to erase the current contents of the program's configuration block. Any switches specified after the clear switch are added to the just-cleared configuration block.

Example:

```
CFIG386 -CLEAR 386LINK
CFIG386 -CLEAR 386ASM -NOLIST
```

1.6 Displaying A Program's Configured Switches

If CFIG386 is run with no switches on the command line, it displays the current contents of the program's configuration block.

Example:

```
CFIG386 386ASM
CFIG386: 3.0--Copyright (c) 1986-90 Phar Lap Software, Inc.

Phar Lap program type: 386|ASM Version 3.0
Configured switch values:
   -INCLUDE \INCLUDES\
   -TWOCASE
   -386P
```

Note: CFIG386 does NOT check the values of any of the switches or switch parameters which it stores in the program's configuration block. Thus, it is possible to configure invalid switch values into a Phar Lap program. You should **always** run the program after configuring it to make sure that the configured switch values have the desired effect.

1.7 Selecting A Program IMAGE Within the File

A single .EXE file may include more than one Phar Lap program image. For example, the protected mode assembler has two program images: a 386|DOS-Extender Stub Loader image followed by the assembler program image. By default, CFIG386 configures the switch settings for the last program image in the file; in the example above, assembler switch settings are configured. The program image to be configured can be explicitly specified using switches recognized by CFIG386. It is possible to select any individual Phar Lap program image or to select all program images in the .EXE file.

The -ALL switch instructs CFIG386 to configure all of the Phar Lap images in the .EXE file.

The -FIRST switch instructs CFIG386 to configure the first Phar Lap image in the .EXE file. For the protected mode assembler or linker this is the 386|DOS-Extender image.

The -IMAGE switch instructs CFIG386 to configure a specific Phar Lap image in the .EXE file. The switch takes a single argument which specifies the image number within the file, where "1" is the first image.

The -LAST switch instructs CFIG386 to configure the last Phar Lap image in the .EXE file. For the protected mode assembler or linker this is the assembler or linker itself. This is the default operation of CFIG386.

Example:

```
CFIG386 386ASMP -NOLIST
CFIG386 -FIRST 386ASMP -VMFILE VMMDRV
CFIG386 -ALL -CLEAR 386ASMP
CFIG386 -IMAGE 2 -CLEAR 386ASMP
```

1.8 386|DOS-Extender Stub Loader

The Phar Lap 386|SRCBug and 386|DEBUG debuggers, and the protected mode versions of the assembler and linker, are distributed with a 386|DOS-Extender Stub Loader bound to the front of the actual debugger, assembler, or linker program. When the program is run, the stub loader searches the directories in the PATH environment variable for the 386|DOS-Extender program and loads it into memory. The 386|DOS-Extender then loads the protected mode debugger, assembler, or linker.

The 386|DOS-Extender Stub Loader can be configured just like any other Phar Lap program. However, there are two important distinctions to keep in mind.

First, the stub loader itself does no switch processing. Any switches configured into the stub loader are processed by 386|DOS-Extender.

Second, the name of the 386|DOS-Extender file to be loaded by the stub loader is printed. This file can be changed by the -DOSXNAME switch, which takes a single argument, the name of the 386|DOS-Extender program file.

Example:

```
CFIG386 386DEBUG
CFIG386: 3.0--Copyright (c) 1986-90 Phar Lap Software, Inc.

Phar Lap program type: 386|DOS-Extender Stub Loader
   -DOSXNAME RUN386.EXE
Configured switch values:
   -VMFILE VMMDRV

RENAME RUN386.EXE DOSX.EXE
CFIG386 -DOSXNAME DOSX.EXE 386DEBUG
```

1.9 Redistributing CFIG386 with 386|DOS-Extender

386|DOS-Extender is distributed in two forms: as a standalone program for doing applications development, and as a bindable program which can be combined with an application. Both the standalone program (distributed as RUN386.EXE) and the bindable program (distributed as RUN386B.EXE) can be configured with the CFIG386 utility. The bindable version can be configured both before and after it is combined with an application program.

Because the bindable version of DOS-Extender does not process any command switches from the command line, it is necessary to configure in any necessary DOS-Extender switches. Developers who have purchased the run-time license for the DOS-Extender are permitted to redistribute the CFIG386 utility to their customers so that the customer can configure switches into the DOS-Extender bound into the application. Please see the *386|DOS-Extender Runtime License Agreement* for further details.

1.10 Summary of Features

Command line syntax:

```
CFIG386 [switch ...] exefilename [progswitches ...]
```

Command line switches:

-ALL	Configure all Phar Lap images in the .EXE file.
-CLEAR	Clear all configured switches in the selected program image.
-FIRST	Configure the first Phar Lap image in the .EXE file.
-IMAGE *imagenumber*	Configure the specified Phar Lap image in the .EXE file.
-LAST	Configure the last Phar Lap image in the .EXE file.
-DOSXNAME *filename*	For a 386|DOS-Extender Stub Loader only, select the name of the 386|DOS-Extender file (default RUN386.EXE).

Appendix A

CFIG386 Error Messages

Several errors can be reported by the CFIG386 utility. The error messages and their causes are listed below.

`Error:` `File name too long: filename`

Cause: The file name specified is too long for an internal CFIG386 buffer.

`Error:` `System Error`

Cause: An internal error in the CFIG386 utility has been detected. Save a copy of the program which causes the error and contact Phar Lap Software, Inc., at 617–661–1510.

`Error:` `Unable to open: filename: reason`

Cause: An error of some sort prevented filename from being opened. The reason gives more detail as to why the error occurred.

`Error:` `Unable to read configuration for: filename`

Cause: The .EXE file being configured has a valid Phar Lap signature but an invalid switch block of some sort. This error should never occur with a Phar Lap program. Save a copy of the program and contact Phar Lap Software, Inc., at 617–661–1510.

`Error:` `Out of configured space on switch: switchname`

Cause: The internal switch buffer in the program being configured has overflowed. Switch switchname and all following switches will not be added to the default switch table.

`Error:` `Unable to save new configured switch values in executable file`

Cause: The program file is either write-locked or has been corrupted between the time the switch block was read from the file and when it was written back.

`Error:` `Unable to read config block from: filename`

Cause: The .EXE file being configured has a valid Phar Lap signature but an invalid switch block of some sort. This error should never occur with a Phar Lap program. Save a copy of the program and contact Phar Lap Software, Inc., at 617–661–1510.

`Error:` `Not a Phar Lap program: filename`

Cause: The specified .EXE file does not have one of the Phar Lap program signatures that the CFIG386 utility expects to find in the program's configuration block.

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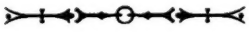

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